

Formalizing the Non-Informational Nature of Emotions: An Ontological Analysis of Affective Experience

(A Philosophical-Logical Essay Incorporating Elements of Cognitive Phenomenology)

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This essay represents the author's speculative thoughts and does not claim scientific novelty or utility. It is a personal exploration of philosophical concepts, not a peer-reviewed study.

At the time of publication, the author was unaware of any works containing identical formulations of the concept of the non-informational nature of emotions. Any similarities to unpublished research or parallel developments are strictly coincidental.

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"Emotion dwells between experience and expression — this conceptual framework demands mindful engagement."

Abstract

This paper investigates the ontological status of emotions and subjective experiences from the perspective of information theory. Through analysis of informational criteria (codability, transmissibility, reproducibility, and verifiability), it is demonstrated that emotions fundamentally fail to meet the requirements for classification as informational objects. Concrete examples (nostalgia, physical pain, musical catharsis) show the impossibility of reducing emotional states to informational processes. The conclusions have significant implications for philosophy of mind, artificial intelligence, and communication ethics, indicating the existence of an irreducible dimension of human experience.

Keywords: philosophy of emotion, information theory, qualia, the ineffable, consciousness, artificial intelligence

Introduction

The debate concerning the adequate expression of subjective experiences through linguistic or formal systems persists in philosophy of mind and cognitive science. While Wittgenstein's *Tractatus Logico-Philosophicus* advocates silence regarding the ineffable [1], this paper advances a more radical thesis: emotions and feelings constitute a distinct class of entities that are ontologically extrinsic to the domain of information.

The present paper aims to:

1. Establish rigorous criteria of informativity.
2. Demonstrate emotions' failure to satisfy these criteria.
3. Derive philosophical implications from this ontological distinction.

1. Criteria of Informativity

According to classical information theory (Shannon [2]), information is characterized by the following properties:

1. **Encodability** — capacity for representation in a symbolic system.
2. **Transmissibility** — ability to be conveyed through a communication channel.
3. **Reproducibility** — potential for exact content replication.
4. **Verifiability** — susceptibility to objective verification.

These criteria constitute necessary conditions for classifying an entity as an informational object.

2. Emotions as Non-Informational Phenomena

An analysis of emotional states reveals their fundamental distinction from information:

1. Non-Encodability

An emotion cannot be fully expressed through a finite set of symbols. As Thomas Nagel notes [4], subjective experience (qualia) inherently eludes objective description. Even the most detailed account of nostalgia ("a heaviness in the chest, memories of home") remains an external label that fails to convey the lived experience itself, consistent with Wittgenstein's thesis on the "limits of language" [1].

Empirical Support:

- fMRI studies (Frith [6]) demonstrate that neural correlates of emotions are not fully translatable to language centers.
- The concept of the "epistemic gap" (Levine [11]) between experience and verbalization.

2. **Non-Transmissibility**

Unlike information, emotions cannot be "sent" and "received." Damasio's research [3] shows that descriptions of physical pain activate only cognitive schemas in listeners, not the somatosensory regions responsible for the actual experience. This violates Shannon's fundamental principle of communication [2], where signals must maintain identity during transmission.

Empirical Support:

- Mirror neuron studies (Rizzolatti [7]): they generate emotion analogs rather than transmit original states.
- "Emotional contagion" phenomena (Hatfield [8]) constitute imitation, not transmission.

3. **Non-Reproducibility**

Not even the same subject can experience identical emotions twice. As Zahavi demonstrates [5], emotional states are context-dependent and cannot be stored as "data." Music that evoked delight yesterday may leave one indifferent today - the experiential content lacks invariance.

Empirical Support:

- Memory reconstruction theory (Loftus [9]): emotional memories distort with each retrieval.
- Neuroplasticity research (Doidge [10]): emotional responses evolve with experience.

4. **Non-Verifiability**

No objective criterion exists to verify correspondence between emotion descriptions and their actual experience. As Levine (1983) argues in *Materialism and Qualia* [11], there exists an "explanatory gap" between physical processes and subjective experiences — a logical void that prevents intersubjective verification of qualia. We cannot prove, for example, that my experience of "red" is phenomenally identical to yours, even if our physical responses are similar.

Empirical Support:

- The "hard problem" of consciousness (Chalmers [12]): absence of bridge laws between physical processes and experience.
- Cross-description emotion experiments (Barrett [13]): low interpretation consistency.

3. **Case Studies Demonstrating the Non-Informational Nature of Emotions**

3.1 **Homesickness**

Literary depictions of nostalgia (from Chekhov to Nabokov) create only approximate analogies, failing to transmit the lived experience itself. Readers project their own subjective experiences rather than receiving "information about longing".

3.2 Physical Pain

Medical pain scales (0-10) serve as conventional signifiers that lack the phenomenal content they denote. Patients cannot "communicate" their pain to physicians—they can only indicate its secondary manifestations.

3.3 Musical Experience

Identical acoustic information (frequencies, durations) evokes radically divergent emotional responses across listeners. This proves that affective experience emerges not from sonic data, but through subjective hermeneutic processes.

4. Formal Conclusion

An entity that:

- Cannot be adequately encoded
- Resists precise transmission
- Defies replication
- Lacks objective verifiability

— does not belong to the class of informational objects. Since emotions satisfy all these conditions, we must conclude:

Emotions constitute ontologically non-informational entities.

For mathematical rigor:

$$\forall x[(\neg E(x) \wedge \neg T(x) \wedge \neg R(x) \wedge \neg V(x)) \rightarrow \neg I(x)]$$

where:

E = encodable, T = transmissible, R = replicable, V = verifiable, I = informational.

"The fourfold failure of emotional states to meet informational criteria establishes their metaphysical exceptionalism within the mind-body problem framework."

5. Philosophical Implications

5.1 For Consciousness Theory

The existence of experience aspects irreducible to information confirms the limitations of computational models of consciousness.

5.2 For Artificial Intelligence (AI)

While AI can process emotion indicators (facial analysis, text parsing), it remains incapable of genuine affective experience. The very notion of "emotional AI" constitutes a category mistake.

5.3 For Communication Ethics

Acknowledging emotions' non-informational nature necessitates:

- Abandoning demands to "verbally express feelings".
- Accepting the inherent limits of empathy.
- Cultivating non-verbal modes of intersubjective connection.

Conclusion

The analysis demonstrates that emotions constitute a distinct class of phenomena existing beyond the informational domain. This revelation opens new perspectives for philosophy of mind while establishing fundamental limitations for artificial intelligence technologies.

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